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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,419	05/19/2005	Yoshiki Shirakawa	Q87995	5977
23373 7590 09/24/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
MESH, GENNADIY				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
09/24/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,419

Applicant(s)

SHIRAKAWA ET AL.

Examiner

GENNADIY MESH

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's Amendment filed on August 20, 2008 is acknowledged.

Claims 7-12 are pending. Claims 1-6 are canceled by Applicant.

Rejection is maintained as it was set forth in previous Office action mailed on May 20, 2008.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US 6,593,447) in view of Kowallik et al.(4,254,018) combine with Cho et al.(US 2003/0059612).

Regarding claim 7 Yamamoto discloses that, that polyester fiber(see lines 16-22,column 1) can be obtain from polyester produced by polycondensation process, wherein catalyst comprising reaction product of :

i) titanium compound - see formula (I) of abstract - this compound is substantially same as compound (I) of Claim 7

ii) aromatic polyfunctional carboxylic acid – see formula (II) of abstract – this component same as component (II) of Claim 7

iii) phosphorus compound - see Formula (III)

Note, that ratio and amount of titanium compound and phosphorous compound disclosed by Yamamoto satisfied the requirements of limitation (i) and (ii) of Claim 7 – see column5,lines 29-67 and column 28,lines 16-23.

Therefore, the only difference in catalyst disclosed by Yamamoto compare with catalyst claimed by applicant in Claim 7 is in specific chemical structure of phosphorus compound.

However, use of this specific phosphorus compound (Formula (III) in Claim 7) for polyester polycondensation and particularly, for polyester suitable for fiber production is well known in the art.

Kowallik teach(see abstract) that phosphonate compound of chemical Formula (III) can be used as heat stabilizing agent during polyester polymerization process and capable not only suppress discoloration, but also prevent **formation of coarse precipitates that can clog spinning dyes during fiber production.**

Therefore, it would have been obvious for ordinary skill in the art at the time of the invention to obtain polyester fiber by polymerization process disclosed by Yamamoto, wherein heat stabilizing compound is the specific compound (compound of Formula III in claim 1) taught by Kowallik in order prevent **formation of coarse precipitates that can clog spinning dyes during fiber production.**

Yamamoto in view of Kowallik discloses polyester fiber, but silent about use of this fiber for knitted or woven fabric application and specific properties of this fiber as Dtex, Silk factor and tenacity as it claimed by Applicant in newly amended claim 1.

However, polyester fibers and use of polyester fibers for knitted, woven or non-woven fabric is known in the art.

Cho discloses use of polyester fibers as multifilament yarn with same Dtex(denier), Silk Factor and tenacity(tensile strength) as claimed by Applicant (see Table 1).

Note, that conversion factor (see Conversion chart attached to Office action) from units [g/d] (as it used by Cho in table 1) is 0.883 to units expressed in [cN/dtex] - as it used by Applicant.

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to use polyester fiber yarn obtain by process of Yamamoto in view of Kowallik for fabric related application as taught by Cho with reasonable expectation of success.

Regarding limitations of Claim 8 - see Yamamoto, lines 50 – 53, column 6 and lines 29-39, column 5.

Regarding limitation of Claim 9 -11 – see Yamamoto , abstract, column 8, lines 60-68 and column 9, lines 1-18.

Regarding limitations of Claim 12 – see Yamamoto, column 1, lines 31- 48.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

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F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 7 - 12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/542,373 in view of Cho et al.(US 2003/0059612) : claims of both Applications significantly overlapping in scope as claimed subject matter drawn to polyester fibers, obtain by the same polymerization process with same catalytic system in both Applications. The difference is in specific properties of the fiber as a Silk factor, Dtex and tenacity(tensile strength) value claimed in Claim 7-12 of instant Application compare with claim 1 of copending Application No. 10/542,373.

However, as it was explained above (see paragraph 4 – discussion with respect to Cho),Claims 7-12 are obvious modification of claim 1 of copending Application No. 10/542,373 in view of teaching of Cho.

This is a provisional obviousness-type double patenting rejection.

3. Claims 7 -12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 7 of copending Application No. 10/541,574 view of Cho et al.(US 2003/0059612) : claims of both Applications significantly overlapping in scope as claimed subject matter drawn to polyester fibers, obtain by the same polymerization process with same catalytic system in both Applications. The difference is in specific properties of the fiber as a Silk factor, Dtex and tenacity(tensile strength) value claimed in Claim 7-12 of instant Application compare with claims 1 - 7 of copending Application No. 10/542,373.

However, as it was explained above (see paragraph 4 for discussion with respect to Cho), Claims 7-12 are obvious modification of claims 1 – 7 of copending Application No. 10/542,373 in view of teaching of Cho.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

4. Provisional ODP rejection maintained for the Record.
5. Applicant's arguments filed August 20, 2008 have been fully considered but they are not persuasive.

Applicant's arguments regarding Claims 7-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US 6,593,447) in view of Kowallik et al.(4,254,018) and in further view of Cho et al.(US 2003/0059612) based on
a) alleged deficiency of individual references and

b) statement that, "Kowallik does not cure the deficiencies of Yamamoto, because Kowallik discloses" ...compound of formula (III) " as a heat stabilizing agent, but not as a component of a polymerization catalyst".

In response to applicant's arguments against the references individually (see a) above), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In addition note, that reasons to combine reference clearly stated in rejection (see paragraph 2 above).

Regarding second argument(see b) above) note, that Kowallik teach that phosphorous compound of Formula(III) can be used as free compound or bound to polymer chain: " Since the heat stabilizer is **chemically bound** to the polyester molecule in the polyesters according to the invention, the major proportion of the transesterification **catalyst** is also **chemically bound** to the polyester molecule, so that **precipitation** of the transesterification **catalyst cannot occur**. The fact that no significant amount of deposition is now found on the screens of the spinning nozzles used for processing the polyesters according to the invention and that no change in the composition occurs even after several hours extraction of the polymer shavings also indicates that the heat stabilizer and transesterification catalyst are chemically fixed" - (see column 5,lines 35-47) .

Also, note that, because phosphorous compound of formula(III) and polycondensation catalyst added at same time to reaction mixture(see Kowallik, column 1,lines 10-17) it is reasonable to assume, that identical phosphorous compound will be involved in identical chemical reaction.

Therefore, Applicant's second argument is unpersuasive.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GENNADIY MESH whose telephone number is (571)272-2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272 1119. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gennadiy Mesh
Examiner
Art Unit 1796

/GM/

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796